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## The Realities of Plant-Based Dieting

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### Poster Information Summary

This project focuses on plant-based dieting, and the fact that even though they are considered healthier than omnivorous diets, they can lead to neurological and physiological impacts when proper nutrition is not accounted for. One of the greatest concerns of plant-based dieting is a vitamin B-12 deficiency, which is a vitamin needed for proper brain development (Tuso, 2013). Due to this, there is special concern for college-aged individuals and pregnant women who follow these diets. Furthermore, in both age groups, individuals' brains are still developing and require adequate vitamin B-12 to foster healthy growth (Sebastiani, 2019). In regard to college-aged individuals, the busy collegiate lifestyle and absent culinary skills of many within this group inhibit them from properly transitioning to plant-based diets (For young, 2012). In addition, college students focus more on the nutrients they are removing, rather than the plant-based options available to replace the foods that they have removed. Within this age group, researchers have found that females are more likely to abuse these dietary trends. They do this to reap the potentially faster weight loss benefits than a meat heavy diet, which results in them neglecting proper nutritional intake; furthermore, this is due to college-aged females being subject to a greater influence of modelsque images on social media (For young, 2012). In regard to pregnant women who eat plant-based diets, one of the main concerns is the decreased levels of fat storage in their milk. As mentioned previously, this could lead to neurological development defects in the fetus from a lack of vitamin-B12 (Tuso, 2013). In addition, there is concern for a lack of vitamin D, calcium, and omega-3 as well (Mayo. n.d.). Furthermore, when plant-based diets are properly adopted, one of the greatest benefits is improved cardiovascular health, which improves an individual's longevity as well (Tuso, 2013). However, the whole foods, plant-based diet is found to be healthier than just vegetarianism. This is due to the former restricting processed foods and refined sugars, which the latter does not (Tuso, 2013). After analyzing these diets, one of the major findings is that the more restrictive the diet, the healthier it can be. However, the more restrictive the diet, the greater the risk of malnutrition as well (Mayo, n.d.).

Plant-based dieting brings an element of social injustice as well. Due to the foods in these diets being healthier, they are inherently more expensive, which excludes certain socio-economic groups from being able to choose these food options (Sotirovska, 2018). For example, those with incomes less than \$50,000 per year and who have completed a low degree of education are the individuals who are more likely to be obese in America (LaMotte, 2019; American, 2012). Furthermore, if one cannot break the cycle of poverty, it is even more challenging to break the cycle of obesity. Another social factor related to dietary choices is environmental health, as meat consumption has environmental costs as well (Van der Zee, 2018). Furthermore, agricultural practices are responsible for 14.5% of greenhouse gas emissions, with 41% of this industry's total coming from the beef sector (Waite, 2019). In addition, due the large healthcare costs in

America, if meat preferences were curbed, the United States could save \$180 billion per year; furthermore, this is due to the decreased need to cover medical expenses from illnesses caused by poor dietary choices (Davis, 2016). However, to reap these social benefits, there must be a large shift in meat eating practices. This is evident due to the results of my carbon footprint calculations being only slightly different from when I ate vegetarian, to when I follow my normal meat heavy diet (Carbon, n.d). However, if there was a small drop in all of American society's carbon footprints, this would create greater benefits for the environment (Carbon, n.d.).

The goal of this project is to educate individuals considering switching to plant-based diets on the negative side effects of these diets if proper nutritional planning is not carried out. It is also to compare the economic and environmental impacts of plant-based diets and meat heavy diets on both an individual and societal level. Although there can be great health and environmental benefits from choosing to forgo meat in one's diet, this project focuses on the darker health side of these dietary trends. Despite plant-based diets being healthier dietary options in theory, they do not automatically translate to healthier eating and can lead to severe impacts on one's health (Tuso, 2013). However, with proper economic and nutritional education, one can make the switch to a plant-based diet without sacrificing their body's overall health.

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